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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,481

09/14/2005

Markku Leskela

LAIN - 092

3854

20374 7590 02/02/2010

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EXAMINER

CORDRAY, DENNIS R

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

02/02/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,481	Applicant(s) LESKELA ET AL.	
	Examiner DENNIS CORDRAY	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9-11,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-11,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Examiner's comment: the indicated support for the amendment to Claim 1, see p 10, was not found on the cited page but was found on p7, lines 28-29 of the Specification.

2. Applicant's amendments filed 11/18/2009 have overcome the rejection of Claim 13 under 35 U.S.C. 112, 1st paragraph and the rejection of Claims under 35 U.S.C. 103(a) over Ruf et al in view of Silenius et al (US 2001/0000063) and further in view of Peel et al (Paper Science and Paper Manufacture). Ruf and Silenius et al '063 fail to disclose sufficient detail regarding the composition of the layers to make the claimed method obvious. Abandonment of copending application 10/475773 has removed the basis for the provisional obviousness type Double Patenting rejection.

The indicated rejections have been withdrawn.

3. Applicant's arguments regarding the remaining rejection over the cited prior art have been fully considered but they are not persuasive.

Regarding the use of the claimed filler of the surface layers of a three layer fiber product, Silenius et al teaches that, in a multi-layered fibrous product, forming a top layer comprising the claimed filler in the claimed amounts provides the advantages of increased retention, increased opacity and a decreased grammage of the layer as compared with using mineral pigment, without compromising strength of the surface (p

Art Unit: 1791

1, par17; p 3, par 44). These disclosed advantages are sufficient in themselves to motivate use of the claimed filler over mineral pigment fillers in surface layer(s) of any paper. Silenius et al also teaches that good formation and good printability of the top layer are also important (p 1, par 8). Ruf discloses a multi-layered fibrous product comprising a middle layer having low filler content and surface layers loaded with filler on both sides. The product has improved printability, higher strength and lower cost due to the filler being concentrated in the surface layers. The advantages of using the filler disclosed by Silenius et al the, increased opacity and decreased grammage of the surface layer without compromised strength, would have been seen by one of ordinary skill as meeting requirements of the paper of Ruf, strength and lower cost, while maintaining good printability. One of ordinary skill in the art would have been motivated to combine the disclosures of Silenius et al and Ruf and to have a reasonable expectation of forming a product comprising a filled surface layer on both sides and having the combined advantages of the filler of Silenius et al and a printable surface on both sides.

Regarding the showing of unobvious results, the Examiner concedes that one of ordinary skill in the art would realize that the examples presented are made according to the claimed invention. However, the showing is not commensurate in scope with the claims, as has been discussed in previous Office Actions and is considered insufficient to overcome rejections presented herein.

Whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the “objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support.” In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range. In *re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980). (Claims were directed to a process for removing corrosion at “elevated temperatures” using a certain ion exchange resin (with the exception of claim 8 which recited a temperature in excess of 100C). Appellant demonstrated unexpected results via comparative tests with the prior art ion exchange resin at 110C and 130C. The court affirmed the rejection of claims 1-7 and 9-10 because the term “elevated temperatures” encompassed temperatures as low as 60C where the prior art ion exchange resin was known to perform well. The rejection of claim 8, directed to a temperature in excess of 100C, was reversed.). See also *In re Peterson*, 315 F.3d 1325, 1329-31, 65 USPQ2d 1379, 1382-85 (Fed. Cir. 2003) (data showing improved alloy strength with the addition of 2% rhenium did not evidence unexpected results for the entire claimed range of about 1-3% rhenium); *In re Grasselli*, 713 F.2d 731, 741, 218 USPQ 769, 777 (Fed. Cir. 1983) (Claims were directed to certain catalysts containing an alkali metal. Evidence presented to rebut an obviousness rejection compared catalysts containing sodium with the prior art. The court held this evidence insufficient to rebut the prima facie case because experiments limited to sodium were not commensurate in scope with the claims).

In *In re Saunders*, cited by the Applicant on p 10, the appellants provided objective evidence of non-obviousness comprising at least two lengthy affidavits having four pages of tables supporting narrowly claimed subject matter of two surfactants. The court agreed that the evidence was sufficient to support the two specific surfactants used in the examples, but did not feel inclined to allow the appellants to expand their claims beyond the specific surfactants shown to give unexpected results (pp 218-219).

The rejections not indicated as being withdrawn are maintained but have been modified to treat the amended claims.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 3-7, 9-11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silenius et al (US 2004/0168779) in view of Ruf et al (EP 0824157, certified translation used herein) and further in view of Peel et al (Paper Science and Paper Manufacture).

Claims 1, 7, 9-11, 13 and 14: Silenius et al ('779) discloses a process for producing a multilayered fibrous product having a grammage of about 50 to 500 g/m², the process comprises fitting on top of a fibrous backing layer a filler-containing fiber layer, which forms the surface of the fibre product and covers the back layer. Three layered structures are disclosed (p 3, par 41).

Art Unit: 1791

The top filler-containing layer is formed from slush of fibre material, to which a product comprising cellulose or lignocellulose fibrils, on which light scattering material particles have been precipitated, is added as a filler (Abs; p 1, pars 1, 3 and 16; p 3, pars 39 and 43; claim 12). The amount of light scattering particles deposited on the filler is from approximately 0.1 to 90% by weight of the amount of filler (p 2, par 31). The top layer typically comprises from about 5 to 50% by weight of the filler (p 2, par 35). The disclosed range overlays the claimed range based on the weight of fibers in the surface layer or, at least, obtaining values within the claimed range would have been obvious to one of ordinary skill in the art. The disclosed filler provides the advantages of good retention, lower grammage and increased opacity and formation over layers made using mineral fillers (pp 1-2, par 17; p 3, par 44).

Silenius et al ('779) discloses that the distribution of weight between the top (surface) layer and back layers is about 20:80 to 40:60 (p 3, par 44), which overlays the claimed range. From the disclosed distribution and range of grammages disclosed for the multilayer product, products are embodied having grammages of the surface layer that overlay the claimed range.

Silenius et al ('779) discloses that the surface and back layers can be produced from chemical and mechanical pulps (p 3, pars 43 and 46).

Silenius et al ('779) does not disclose forming the multilayered product using the claimed multilayer forming process. Silenius et al ('779) also does not disclose a fiber

Art Unit: 1791

layer containing a filler on both sides of a middle fiber layer or that the middle and surface layers each comprise a mixture of chemical and mechanical pulps.

Ruf discloses a process for forming a multilayer fibrous web, which can be a printing paper comprising surface layers loaded with a filler, using a multilayer forming process in the form of a headbox having multiple fiber suspension feeds. The suspensions supplied to the outer layers are loaded with a filler and serve the purpose of improving the printability of the web. In some embodiments, fibrous suspension feeds with larger amounts of fillers contained in the outer (surface) layers are introduced through separate conduits and combined in the nozzle (immediately before the lip of the headbox). The process produces papers with higher amounts of filler at the surfaces resulting in better printability and low filler content in the center layer resulting in higher strength. Ruf et al also discloses that implementing the desired surface characteristics in the boundary layers keeps the cost of additives low (p 3, first two pars and last par bridging to p 4; p 4, last par; pp 5-6, all; p 7, 1st par; p 8, last par, p 9, 1st par; p 13, last 4 pars describing Fig. 1, reference numbers 26-28; p 14, 2nd par; p 15, middle pars describing Fig. 2, reference numbers 44-46; p 20, middle pars describing Fig. 8, Fig. 8).

Ruf et al does not disclose that the middle and two surface layers each comprise a mixture of chemical and mechanical pulps.

Peel et al teaches that typical fiber compositions for printing papers comprise mixtures of chemical and mechanical pulp (Table 2.2).

Art Unit: 1791

The art of Silenius et al ('779), Ruf et al, Peel et al and the instant invention is analogous as pertaining to making multilayered fibrous webs and printing paper. One of ordinary skill in the art would have realized the advantages of using the filler disclosed by Silenius et al as meeting requirements of the paper of Ruf, strength and lower cost, while maintaining good printability and would have found it obvious to form a three-layered paper product having on both sides a surface layer comprising the claimed filler and to form the paper using the claimed multilayered headbox of Silenius et al in view of Ruf to obtain a paper having the advantages of better formation, opacity, strength and printability on both sides and to keep costs lower by having filler primarily on the surface layers. Using mixed chemical and mechanical pulps in each layer would have been obvious as typical fiber compositions used for printing paper.

Claims 3-4: Silenius et al ('779) discloses that the filler comprises cellulose or lignocellulose fibrils produced by refining cellulose or mechanical pulp fibers. The fibrils have an average thickness of is less than 5 μm and correspond to a fraction that passes a 100-Mesh screen (thus inherently pass a 50-Mesh screen) or have an average thickness of from 0.1 to 10 μm and an average length from 10 to 1500 μm (p 1, pars 11 and 13; p 2, pars 27-29).

Claims 5-6: Silenius et al ('779) discloses that the light scattering particles are precipitated in an aqueous phase, and can be calcium carbonate, calcium sulphate,

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS CORDRAY whose telephone number is (571)272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/
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